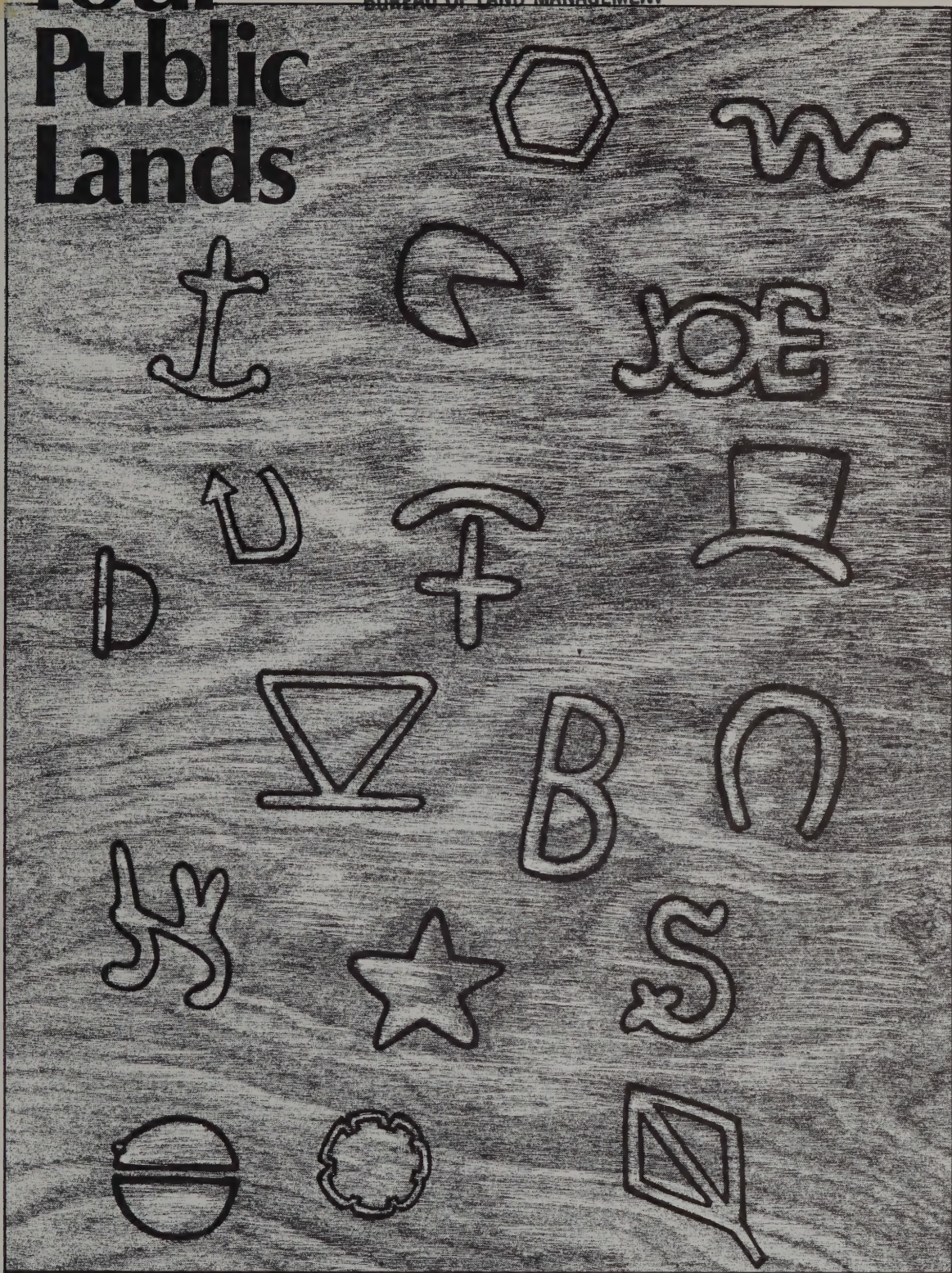


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Spring 1982



Rangeland Management

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Your Public Lands

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Stop Vandalism

On the Range



By Jack de Golia

This windmill's blades and tails are riddled with bullet holes. Its pump mechanism was destroyed by gunfire. Replacement cost \$1875. Later, vandals destroyed the windmill's sucker rod.

Time was when you could leave equipment out on the range in the West, go away for a week or two, and come back to find your equipment just as you left it.

Sadly, it seems those days are behind us now. Increasingly, BLM officials are hearing reports of vandalism. Ranchers complain of fences being cut, windmills being shot, and stock tanks riddled with holes.

In one case in Arizona's Yuma County, an entire windmill was stolen. It stood just 100 yards from a junction of two major State highways.

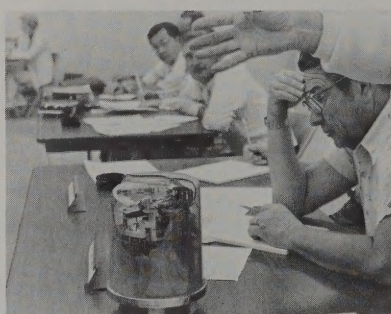
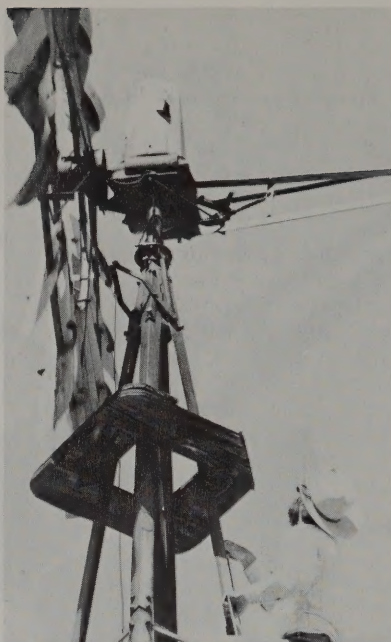
In the Sonoran Desert country administered by BLM in Arizona, water is a valuable and scarce commodity. With summer temperatures reaching 110°F or more, cattle won't last long without water. Yet a few bullet holes, thoughtlessly shot into a stock tank, can kill cattle and wildlife as sure as the bullets that made the holes, when the water drains out onto the desert floor.

One of the most common items stolen from the desert range are water pump motors. Ranchers often use small, two-cycle motors to pump water from remote wells. A rancher will put in enough gaso-

line to run the motor long enough to pump a desired amount of water. When the gas runs out, the pump quits. Meanwhile, the rancher will have gone on to other areas on the ranch. Left alone, though, these motors are easy prey. The theft may not be discovered for weeks; witnesses are rare.

Camping at water sites (springs and wells) can be a subtle form of vandalism when it deprives cattle and wildlife access to the water. In spite of State laws prohibiting the practice, it appears to occur anyway, especially during hunting season.

(Below) A fence post blasted in two by a vandal's shotgun (Top right) A damaged windmill near Kingman, Arizona. The rancher had to bear the labor costs of installing a new pump mechanism. (Bottom right) Bill Simson listens as Al Carpenter, Manager of the Mohave County Electric Co-op, explains how vandals damage utility company facilities in isolated places.



With the increased use of desert range lands, ranchers also see an increase in damage to fragile desert soils from off-road vehicles. In other cases, range facilities in remote spots have been vandalized by people driving cross country.

Especially alarming about these examples of vandalism is that they have the potential of dividing the very groups that must work together to solve the problem. Ranchers, troubled by thoughtless public-land users, may feel one group or another is to blame. Hunters may feel anger at ranchers who lock gates on roads leading into a ranch.

Concerned about vandalism and its effect on relations between public-land users, the BLM's Phoenix District Advisory Council looked into the problem.

The council held a public meet-

ing in Kingman, Arizona, on October 22, 1981, and visited several ranches to assess the problem first hand. After hearing from the public and seeing the problem for themselves, the council members put together a set of recommendations. They presented the recommendations to the Phoenix District Manager in December 1981.

The seven council members serve two-year terms and volunteer their time to provide advice to BLM. Like council members on all 55 BLM district advisory councils, Phoenix council members come from a wide range of public land interests.

The council recommended a three-pronged attack on vandalism: 1) increased law enforcement by Federal, State, and local officials; 2) intensive management actions in particular situations (such as limit-

ing off-road vehicles to existing roads if erosion from crisscrossing vehicle tracks is severe); and 3) an education campaign for the general public and judges.

The council suggested a meeting between BLM, Arizona Game & Fish Department, county sheriff, and Arizona Livestock Sanitary Board officials. All agencies concerned have limits on the manpower and money they can devote to controlling vandalism. A coordinated effort is therefore essential.

Council members also urged increased use of the Arizona Game & Fish Commission's "Help Our Wildlife" hotline. This is a toll-free telephone number citizens can use to report game law violations, including vandalism. The State gives rewards for convictions resulting from hotline reports.

A chief problem with range land vandalism is that much of it goes unreported. As part of the education campaign, the council suggested BLM urge those ranchers holding BLM grazing leases and permits to report vandalism to county sheriff departments.

Finally, the council noted the importance of cooperation between ranchers, hunters, and other public land users. Together these groups can work for greater law enforcement, let judges know the seriousness the community attaches to vandalism, and serve as extra "eyes and ears" on the lookout for vandals.

The goal is to encourage the few who vandalize to stop—and think.

Jack de Golia is a Public Information Specialist in BLM's Phoenix District, Arizona.

Ranchers and stockmen who use the public rangelands have been working for range improvement since before the Taylor Grazing Act was passed in 1934. So has the Bureau of Land Management—even back then when it was operating under an entirely different name. Both groups are still working at it.

The Bureau is emphasizing the necessity to improve our public rangelands as rapidly as possible and in the most cost-effective fashion. The results we produce may not be discernible tomorrow, or even next year, but we are firmly committed to being better public landlords and better trustees over the property we manage for the people of this Nation.

The job involves managing the Nation's public lands, and the resources on those lands, in the public interest. That means orderly

development and wise use, so that those resources will be a benefit to all Americans. It means conservation and striking a balance between how much of our resource base to use today and how much to save for future generations.

It's a philosophy that has been enunciated by President Reagan and by Secretary Watt. According to the polls, it's a philosophy the people believe in, too.

In this Administration, we are going to be decision-makers. That's what we were called in to do—and that's what we'll do. We may make some people unhappy because we do make decisions rather than endlessly analyze or study. However, we have two guiding precepts: economic recovery and the National interest. We think those precepts will guide us well in producing results.

With our new leadership, we will

be decreasing, rather than increasing, the amount of red tape. Where we must have Federal regulation, that regulations will be reasonable, easy to understand and comply with. It will encourage needed development in an environmentally sound manner and will be designed to establish a balance between multiple uses, not a stumbling block to any use.

In rangeland management, the first step we have taken is to develop a new policy—one that is based on "selective management" of grazing allotments. Basically, the new policy means putting the biggest piece of the appropriation pie where it will do the most good. Out on the range we call that "getting the biggest bang for the buck". In corporate boardrooms, they refer to it as "highest return to the stockholder". In your personal finances you call it "stretching the budget". It's just good money management—the cornerstone of economic recovery.

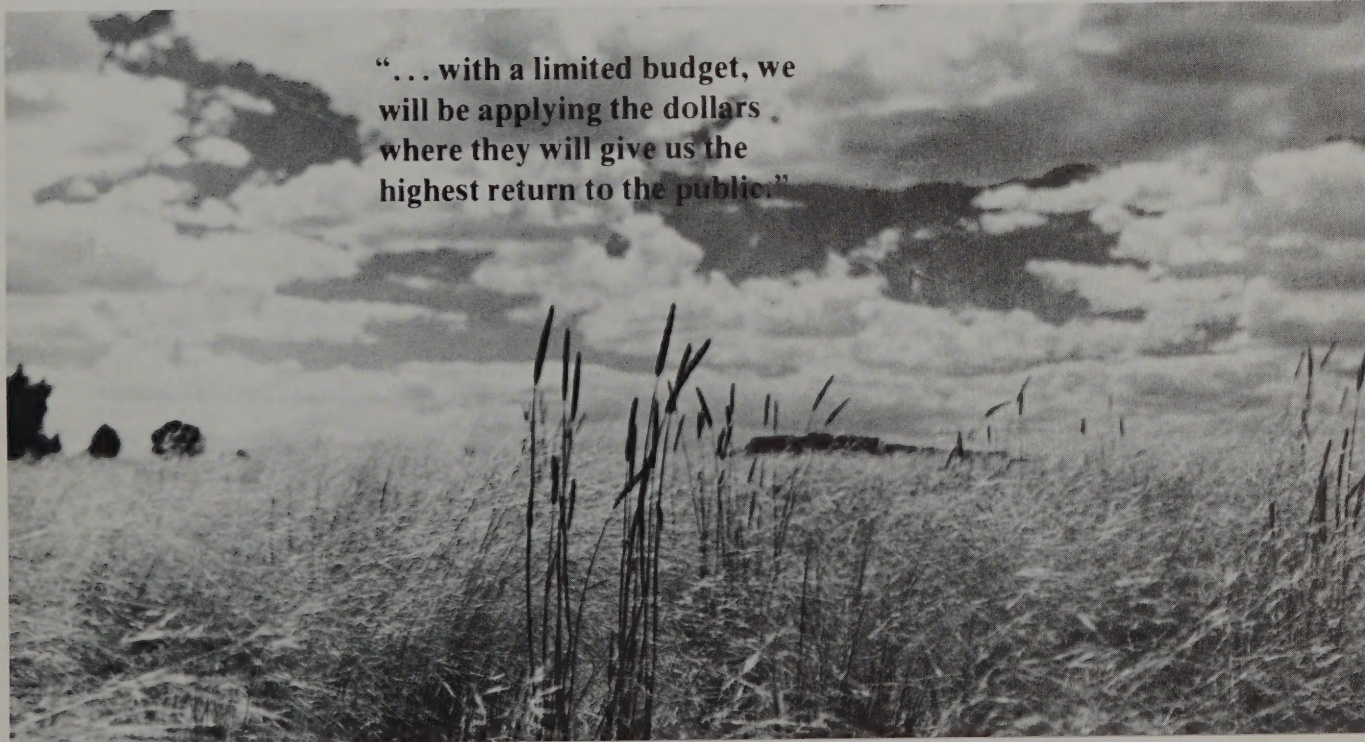
Whatever you choose to call it, the Bureau's proposed new strategy for managing and improving the public rangeland is a recognition of long-standing problems, offering workable solutions and some definitive guidelands for improving the future.

Let me briefly describe the "selective management" technique.

Rangeland Policies for the Future

Robert F. Burford,
Director of BLM

"... with a limited budget, we will be applying the dollars where they will give us the highest return to the public."



"As a multiple-use agency, BLM must consider range conditions in the overall context of all rangeland resources."

The first thing to be done is to analyze all the grazing allotments so that those sharing similar characteristics as to resources, economics, management techniques and social characteristics are grouped into one of three categories:

CATEGORY M: consists of highly productive allotments in good condition, with no resource conflicts. The management objective on these allotments would be to maintain the current satisfactory situation—a move which doesn't take a very big piece of the available money pie.

CATEGORY I: would be the biggest money user. These are allotments in fair-to-poor condition, which are not producing at a medium-to-high production potential, and where resource conflicts exist. These are the allotments where the present condition stands a good chance of improvement...and these are the places where the largest shares of time and money will be applied.

CATEGORY C: consists of allotments which are in stable condition, with no major resource conflicts, but with economically-limited production potential. Our short-term management route would be to act as "custodians" in such areas, and to prevent further deterioration.

"Selective management" does not mean we are going to neglect those ranges which are in Category C. We will monitor these to see that they do not suffer further damage. However, with a limited budget, we will be applying the dollars where they will give us the highest return to the public.

By doing just that, the Bureau of Land Management in the past year has contributed almost \$9 billion to the General Fund of the U.S. Treasury from multiple use programs on the public lands. During the same period, \$461,347,000—almost half a billion dollars—was distributed to the State governments, and still more to individual counties in the West. In the present economic situation, that is an exceedingly important asset to government operations and to the people those governments serve.

In the field of rangeland management, BLM is also going to encourage investment by the private sector—the range user. Ranchers holding grazing leases on public lands administered by the Bureau will be required to bear the cost of maintaining improvements on their allotment. These improvements may be structural or non-structural, and could include fences, wells, springs, reservoirs, pipelines, or other needs. Under the new rules, operators would be allowed to perform the maintenance work themselves; to contract with others to do the work; or, to reimburse BLM for the cost of maintenance.

The Bureau would continue to bear the cost of constructing or replacing the improvements unless, of course, replacement was necessary because of a lack of maintenance. But, the burden for maintaining an improvement that benefits a permittee's grazing allotment will be assigned to the permittee.

Operators' responsibilities would be spelled out in an agreement with BLM and would be made a condition of the grazing lease. Grazing privileges could be revoked if operators failed to do the maintenance work according to the standards in the agreement.

This is just another move toward balancing the responsibilities between government and the private sector...to provide business with a climate of certainty...and to get government out of the places it should not be, places where the private sector can do a better job.

One of our major priorities in managing the public lands is to minimize short-term disruption and ensure long-term stability for the western livestock industry and

the economy of many western communities dependent upon those lands and their resources.

As a multiple-use agency, BLM must consider range conditions in the overall context of *all* rangeland resources. Energy and minerals are just two of the resources that can be found on the range.

We recognize the critical need to develop those resources in an environmentally balanced manner that will contribute to multiple-use of the land.

We recognize the continued reliance of the western livestock industry and communities on the public lands, and we will strive to balance the local mix of uses. We feel the best way to stabilize the economy in these areas is to ensure sustained-yield management of the resources that are the backbone of the economy.

Environmental and economic considerations have an important place in rangeland management decisions and can be successfully used in tandem. The human environment includes the social and economic systems within which we operate as men and women, as well as the biological systems. Most decisions we make have economic effects. Some may affect the economy of the entire Nation. Others may affect only a small number of people, or a small community.

We recognize this, and attempt to consider both local and national interests and impacts in our decision process. Whenever possible, we consult, coordinate and cooperate with local as well as national level interest groups to resolve concerns.

We won't always please everybody...but we will be good neighbors, and we can be depended upon. Our goal is to be a good, balanced, productive landlord for our owners and our tenants...and to managing the public's resources and the public's money for the best return to the taxpayer.



Cowboys, Politics, and the Taylor Grazing Act

By Paul Rigtrup

It was understandably difficult for the long-established and settled inhabitants of the American East to believe that the great uncivilized territory in the West could produce men who were their intellectual equals. Just listen to the way they talk! And, look at their clothes! And, how can anyone live a dozen years in those pointy toed boots, without pinching his brain – at least a little bit?

Contrary to stereotype, ranchers were sensitive, to this and other kinds of condescension. However, for most of them, sensitivity had long since given way to the pragmatic realities of survival in the harsh environment of the West.

Early evidence of this pragmatic side of the western cattle rancher is to be found in the way he discovered the realities of American political practice, and then capitalized on those realities.

By 1933, most of the pragmatists on the cattle ranches in the West knew what they needed. Two key factors in the management of the western grasslands were the need to tie the grazing lands to smaller tracts of irrigable land which could produce hays, grains, or winter

forage. And, of critical importance was access to water for grazing.

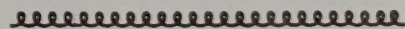
By 1933, when he came to testify for “his” Taylor Grazing Act, Congressman Ed Taylor had seen a lot. Indeed, it was his great reputation as a leader in public land law making which led his friends in the livestock industry to seek his help. He was the owner and operator of three small ranches. During his twenty-six years in Congress he had served twelve years on the Public Lands Committee. He also recognized where issues could be more easily confined and controlled. He rose to chairman of the Public Lands Subcommittee in the House Committee on Appropriations.

He perfunctorily laid out his expectations for this new law. Although he praised the grazing management in the forest reserves, he expected the new grazing districts on the arid range to be established under the Secretary of the Interior. It was clear that the lands in grazing districts would be closed to other entries. He saw the lands retained in Federal ownership and leased under preferential terms mostly to small cattle ranchers who owned the meadows and hay lands and, most importantly, the watering places or rights.

The history of the 10 State region from Colorado west to the Pacific does not suggest that the cowboys would hold many of the keys of political power. To begin with, they were never very numerous. If the cowmen’s votes – and their opportunities – were so few, how did they manage to win as often as they

did? They were horse traders! It was this horse trading sense, sometimes elevated to a kind of cowboy statesmanship, that led them from their first big political victory, the Taylor Grazing Act, into a quarter century era of administrative progress and dominance.

During the 1934 hearings Ed Taylor introduced another cattleman from western Colorado to testify in favor of the Taylor grazing bill. He was Farrington R. Carpenter of Hayden. Before long he would become a central figure in grazing history, and perhaps its most fascinating figure. He laced every conversation with the colloquial language of the cowboy, like “a bull with a batch of calves.” He was the epitome of the funny talking cattle rancher from out West. He never drew attention to his formal education, but if you asked him he’d admit to an undergraduate degree from Princeton – and a law degree from Harvard!



If the cowmen’s votes were so few, how did they manage to win as often as they did?

During his first year at Princeton he filed on a homestead in Routt County, Colorado. He then persuaded a friend to file another homestead three miles away and, by fencing carefully selected 40's, they managed to enclose considerable public land on which to run their cattle – an accepted practice in that time and place. After law school he returned to Hayden to raise cattle and to establish a law practice – almost entirely lands cases in the land office at Glenwood Springs. Of law practice in Hayden he has said, "There had never been a lawyer there before, there never was after I left, and there was some question whether there was when I was there."

After a quarter of a century as a cowman-lawyer, he'd shed all vestiges of the Ivy League. He went to Washington in an effort to qualify beef as a basic commodity before the Agricultural Adjustment Administration and encountered Ed Taylor only when he went to the Congressman's office to pick up mail. The Congressman took advantage of his presence in Washington to gain a credible witness for his grazing bill. In less than a year Carpenter was offered the job of "running" the Taylor Grazing Act.

One of "Ferry" Carpenter's favorite reminiscences was about his trip to see the Commissioner of the General Land Office to get maps. Carpenter: "I've come to get the maps."

Commissioner: "What maps?"

Carpenter: "The maps to the lands."

Commissioner: "What lands?"

Carpenter: "The lands I'm to manage."

Silence (very awkward)

Commissioner: "There's no maps."

Carpenter: "If there's no maps, how am I to find the lands?"

Commissioner: "We can't find the lands!"

According to Carpenter he walked away talking to himself. This is how he described his first encounter as director-designate of the new division of grazing with the bureaucracy of the General Land Office. It was but an early

glimpse at other events yet to follow.

There was a world of inherent tension between Carpenter's new grazing division – the "Taylor Graze" – was what many ranchers called it – and the old and staid General Land Office. But the opening language of the Taylor Grazing Act gave the conflict a special bite. Even though the description title of the Act began with these words: "To stop injury to the public grazing lands"; the preamble included these words: "pending its final disposal—"! So the "Taylor Graze" is created to nurse the lands back to some degree of health while the undertakers at the General Land Office go right ahead with preparations for the funeral.

Carpenter quickly demonstrated his determination to use his horse trading skills to beget only constructive and sound results. Even before there were appropriations and a grazing division, he set off with 17 borrowed advisors from the Forest Service, Geological Survey, and other agencies to conduct a series of public meetings throughout the West. When the first advisory board meeting occurred at Rifle, Colorado, Carpenter arrived to find the cattlemen and sheepmen not speaking. They stayed at different hotels, and refused to talk to each other. So he sent out invitations for dinner to 24 spokesmen – 12 for each side. He said for them

to eat dinner together, but he got there ahead of them and arranged the seating so that they alternated – cow man – sheep man – etc. They soon learned that they could talk to each other.

Carpenter had a long standing aversion to the "papa knows best" attitude of the Forest Service. He was determined to avoid it in his new outfit. His first effort was in the series of regional meetings which began at Grand Junction. He followed that up, when on his first encounter with members of the Appropriations Subcommittee, he appeared to challenge: "You give me 40 ranchers and I can run this outfit." His bluff was called and he was provided with funding for himself, a secretary, and 40 positions.

But Ferry Carpenter was not through. He knew that when a rancher comes before the government for favors "he has a very loose idea of ethics." Those 40 government men could hardly be expected to deal with exaggerated data from all those stockmen. But Section 9 of the Act spoke of "local associations of stockmen" and of "local hearings." Taking this and other language from the Act, Carpenter soon began to create a system of local advisory boards to hear the presentations from their peers – and to keep them honest. The Congress promptly amended the Act so that Section 18 became a ratification of the advisory board



system. In addition to discouraging the “papa knows best” attitude which he detested, Ferry Carpenter had supplemented the manpower of his 40 “ranchers.” By 1937, the field staff had grown to 75, but there were 678 advisory board members.

So that is how he did it. He took a raw and imperfect Act to the people themselves – the stockmen – in meetings at places like Salt Lake City, Bakersfield, Rifle. And with 17 carefully selected government men – working with the cream of the western stockmen – they wrote the regulations and the code, while the regulation writers from the eastern bureaucracy watched in disbelief. It was only a short step from the regional meetings to the advisory board system. He proceeded so independently, in fact, with the organization of advisory boards that Secretary Ickes learned about them primarily through the special agents of the General Land Office. So when Carpenter returned to Washington, he was promptly summoned to Ickes office and fired!

But the ground work had been well laid in the West and soon the White House was inundated with wires and telegrams. It was hardly overnight before Undersecretary Oscar Chapman (also a Colorado man) paid Carpenter a visit and invited him along to the White House. The next morning he was invited once again to the office of Secretary Ickes where he was told – in the words of Carpenter – “He guessed he liked me better.” Carpenter remained on the job for a few formative months.

By 1938, The Division of Grazing was well established and had doubled in size. It was now a frightening bureaucracy of over 80 souls! But most of that growth was in Salt Lake City, Reno, Albuquerque, Burns, Billings, – those strange sounding towns out West. The 1938 Directory of the Division of Grazing reveals some interesting names. At least sixteen of them were to become the future movers and shakers of the Bureau of Land Management. And, for the most part, they were just like their mentor, Ferry Carpenter – they were horse traders and they were pragmatists!



Carpenter’s tour of Federal service was brief – only about four years. His outfit, the “Taylor Graze” didn’t do much better. It lasted only eleven years and it never reached 300 full-time public servants! But it got good roots down – all over nine western states. These remained to grow and to be felt in Washington for many years.

By this time in the late thirties some new forces were beginning to emerge. Competing values were beginning to appear – outdoor recreation, military requirements, minerals, etc. – all suggesting that the stockman’s romance with the land would never be too secure. In a place in California called Hollywood, a new image of the cowboy was being molded – without benefit of advisory boards. Finally, as the war clouds gathered in Europe, the Nation began to prepare for war. When the Federal agencies were urged to move their headquarters from the heart of Washington to the suburbs, the Grazing Service found its suburbs in Salt Lake City, Utah.

As the end of World War II approached, the Grazing Service found that its own was just heating up. Although Senator McCarran of Nevada was given much credit for those troubles, others must share the credit. McCarran wanted to see the Service cut back to 100 employees and to be self supporting. Congressman Jed Johnson of Oklahoma wanted grazing fees increased sufficiently to make the Service self supporting, so he whacked the budget from \$1,359,500 to \$425,000. McCarran relented and raised the figure to \$802,500; but that was insufficient to prevent separation of nearly two

thirds of the Grazing Service and a short furlough of the remainder. Before the smoke cleared, the Grazing Service lost its separate existence. By Reorganization Plan No. 3, July 16, 1946, President Truman consolidated the Grazing Service and the General Land Office into the Bureau of Land Management. He had married the nurse to the undertaker!

Once again, those roots which Carpenter had put down began to emerge from the ashes. A few of his disciples were still there throughout the West... the pragmatists and the horse traders. They knew who held the seats and on which committees of the Congress. More importantly, they had grass roots support sufficient to carry them at least into the second decade of BLM. By the end of that second decade – 1966 – the issues surrounding public land management had become so turbulent that the management of grass and grazing had become inseparable from the many other competing values. By that time, however, the imprint of the western stockman, of Ferry Carpenter and his disciples had become permanent, and there is no way that it will ever be erased.

Paul Rigtrup is manager of BLM’s Training Center in Phoenix, Arizona.



Multiple Use of Rangelands

Ed Roberts

The Bureau of Land Management in its stewardship of the public rangeland, finds itself in a transition from one world to another. A substantial portion of our rangelands have still not reached their potential for resource production. Public rangelands are falling short in meeting user demands for wildlife, recreation, and livestock production.

Emerging examples of successes are providing good examples of pathways to improved rangeland stewardship. These good examples are being forged out in a cooperative "give and take" spirit between the Bureau's professional managers, resource users, special interests, and the general public. Most importantly, local input and decisions at the "ground level" where things are actually happening and reemergence of the old fashioned ethic of being good neighbors are the keys to success.

To illustrate how this new approach is working, let's take a look at a composite situation, which will serve to portray how cooperation and hard work can make things happen, just as it has in parts of

Colorado and other Western States.

The sagebrush basin was nestled in the Rocky Mountains. Ponderosa pine, Douglas fir, mountain mahogany, and aspen bordered the basin, giving it a park-like appearance. A small stream meandered through the sandy-clay soil. Willows, cottonwoods and the unmistakable green of lush ground vegetation made the stream area a vibrant ribbon among the gray sagebrush. Patches of crested wheatgrass, waving in the gentle, clear breeze, were scattered through the park. Cattle grazed the grass, strolling slowly to drink from troughs at adjacent wells. Mule deer bounded through the sagebrush, flushing a flock of sage grouse from their late afternoon rest. A golden eagle, perched in one of the cottonwoods, watched attentively as a small herd of migrating antelope paused briefly at a fence before going underneath and running gracefully to a valley bottom home elsewhere. The shrill, commanding bugle of a bull elk pierced the autumn air, echoed off the mountain sides and caught the ear of a fisherman and his family

trying hard to catch some brook trout for dinner. These sights, scenes and sounds make up one of the Nation's most valuable resources: the western rangelands.

Rangeland resources – soil, water, air, vegetation, wildlife, livestock, and their composite on the landscape – are an integral part of America. Perpetuation of these values on 170 million acres of public lands depends upon applied stewardship by the Bureau of Land Management. Achieving multiple use of such resources is a demanding job. It requires constant attention and cooperation from everyone. To get a better idea of what this means, let's examine our sagebrush basin a little more closely.

Things were not always as portrayed in the basin. Only ten years ago, the soil and vegetation were slowly disappearing. Fences were old and in disrepair. Their wires stopped the antelope but let livestock wander. Grass plants were few and far between. Cattle, deer, and elk concentrated in the stream area, grazing and browsing its vegetation to the point where the plants were dying out. This overuse, plus trampling of the streambanks, left little shade, caused the streamside to cave in and washed the potentially fertile soil into ugly silt beds. It was at this point that man, often thought of as an intruder and degrader of the environment, stepped in to make things better.

Improvement of the basin began at a public meeting in the gymnasium of a local high school. The BLM area manager and his staff of professional technicians were describing how they viewed the basin's problems. The audience, consisting of ranchers, businessmen, interested townspeople, and other agency officials, were hearing



about something called a multiple use plan to solve these problems. Their interest evolved into a three-hour discussion. . . . Cattle were losing weight on the range and calf crops were down; recreationists complained of having to go further and travel longer to find a place to enjoy; State wildlife personnel described decreasing big game numbers and antelope dead at fence corners; avid fishermen recalled the "good old days" of a full creel of trout; the high school biology teacher could no longer take her class to the basin to study eagles and other animals; people living below the basin pointed out how the stream always seemed to flow muddy water into the river. . . and so it went. Something had to be done and it was clear it was everyone's job.

Changing the basin for the better required recognizing that it had its own identity. The animals, plants, soil, water, air, and people which existed there formed a unique environment or ecosystem. As times changed and human demands varied, the balance of this ecosystem was upset. Things just didn't seem to fit together anymore. Corrective steps to gain a new, satisfactory balance had to consider all the elements of this ecosystem and how they were interrelated.

Older, dying stands of sagebrush were first outlined on maps and then marked on the ground. These sites were plowed and reseeded with crested wheatgrass. Alfalfa and bitterbrush were mixed in with the grass. This provided not only good grazing forage for cattle, but also new browse forage for deer and antelope, and tender succulence for sage grouse. The soil, once prone to fast erosion, was now held by many new roots.

Local ranchers worked closely with BLM to identify the old, problem fences. These were repaired or replaced with new ones, which controlled livestock. They also were designed so that the bottom strand was high enough to pass antelope and the top strands were low and wide enough to let deer cross over and through. Once the fences were changed and the seedlings in, ranchers proceeded to help BLM install new wells and springs to water their cattle. Water from these developments was piped to drinking troughs, each trough contained a curious-looking wire mesh ramp. This device enabled small birds and mammals, who found their way into the troughs, a way of escape. All together, both livestock and wildlife had regained needed food, water and cover. The soil, now healing, gave rise to a new growth of native vegetation. Cattle could now leave the battered stream bottom, graze the upland grass, and drink from the wells and springs.

The State wildlife agency, U.S. Forest Service, and interested groups helped also. Using new wildlife information, the State adopted hunting seasons for the basin and adjoining areas that better balanced big game numbers with their habitat. State fishery crews surveyed the stream with BLM biologists. Several stream structures were installed to create resting pools, spawning beds, and rearing areas for the brook trout. Severely eroded stream banks were seeded, planted and the old cottonwoods given new life with help from local representatives of the Izaak Walton League. The high school biology teacher and other members of the Audobon Society installed some bird boxes along the stream and throughout the basin to

add new sites for bluebirds, swallows, and other "cavity-nesting" birds.

The U.S. Forest Service, working with BLM foresters and range conservationists, developed new systems for timber harvest and cattle grazing. This retained the pine, fir, aspen, and mahogany around the basin as prime habitat for elk. Also, cattle could more easily be trailed to and from Forest Service summer pastures to BLM spring and fall ranges. As a result, cattle left and entered the basin in better condition, and calf crops increased.

The situation portrayed for our sagebrush basin is typical of the "new world" for many areas on western rangelands. To some, it may seem "ideal" or even unrealistic. Still the cooperation steps and corrective actions are realistic, are taking place, and *do*, certainly, establish a goal that BLM is trying to reach. Different environments, problems, and user demands, of course, change the management strategy and techniques but not the purpose – stewardship. The BLM, together with other Federal and State agencies, work with the public to manage the public lands. On-the-ground improvement actions and monitoring of field conditions ensure that management objectives are kept on track and commitments are honored. The end result is perpetuation of rangeland resources and achievement of multiple use of their values for the public.

Ed Roberts, formerly a Wildlife Specialist with BLM's Washington D. C. Office, is currently Assistant District Manager, Socorro District, New Mexico.

Success on The Pipeline Allotment

An Allotment Management Plan in Action

Dick Thomas



Eight years ago, Walter Linton walked into the BLM Phoenix District Office concerned about deteriorating range conditions on his Pipeline Ranch allotment, located 26 miles northwest of Wickenburg on the Alamo Lake Road.

Mr. Linton wasn't sure what to do or how to do it, but he did know that he wanted to reverse the downward trend in forage production and rebuild the 28,400 acres of Federal (BLM) land, 4,077 acres of state-leased land and 80 acres of

private land into what a desert range should look like.

Listening intently were members of the BLM District staff, including Larry Hendrix, who was Lower Gila Resource Area Manager at the time, and Range Conservationist Jack Norris. They quickly realized that Linton's desire to improve conditions on his allotment matched perfectly with the BLM emphasis to develop effective grazing systems through Allotment Management Plans (AMP's).

AMP's are action plans developed cooperatively between the livestock permittee and BLM aimed at providing long-term benefits through a grazing system. On the Pipeline Allotment, a rest-rotation system was used. This was accomplished by dividing the allotment into pastures by fencing, developing water and implementing other improvements.

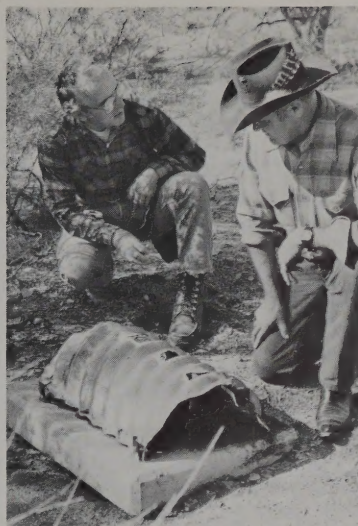
The benefits of an AMP aren't confined strictly to livestock. Wildlife and other resources on the land also benefit from improved forage and water conditions.

From this casual meeting, the Pipeline AMP was born—eventually to become a “showcase” example of how an AMP can dramatically improve rangeland even in the harsh environment of the desert Southwest.

The history of the Pipeline Allotment dates back to the early part of the century when the Bullard brothers began laying a pipeline from Alamos Spring across this dry ex-

What is an Allotment Management Plan (AMP)?

An action plan between the rancher and BLM designed around a grazing system for achieving pre-determined objectives to forage conditions and range trends. The plan includes: (1) An agreement between rancher and BLM; (2) Basic forage and soil data; (3) Statement of objectives agreed to by both parties; (4) Grazing system to achieve Plan objectives; (5) Constant monitoring and review of progress; (6) Improvements needed.



(Left) Looking out across the 32,557-acre Pipeline Allotment northwest of Wickenburg. (Middle) Arizona Game and Fish Department Chief of Game Management, Steve Galizioli and BLM Gila Resource Area Manager Dean Durfee discuss one of 18 quail guzzlers installed by BLM on the Pipeline Allotment northwest of Phoenix. (Right) Water for the allotment originates here at Alamos Spring.

panse of desert to a mine they were working in the Harcuvar Mountains. However, the plan proved too ambitious an undertaking and the brothers abandoned the project after laying only a few miles of pipe.

Walter Linton bought the Pipeline Ranch in 1971. He sold it in 1975, after the AMP had been implemented, to H.E. Vogt of Scottsdale. Later, it was again sold. This time to the present owner, Mrs. Elladean Hayes Bittner of Congress Junction, who shares the same enthusiasm as Linton and Vogt for the rest rotation grazing management system.

The confidence in the plan by these three owners is already bearing fruits of success. Both Mormon Tea (a shrub) and Bush Muhly (a grass)—the two key forage plants for livestock and wildlife on the allotment—have come back strong from an overgrazed condition. Livestock numbers, which were closely regulated as the three-pasture system was implemented, now have

been built back to the precise number called for in the Plan . . . 138 head.

"The allotment has doubled its forage production since the AMP was put into effect, despite the fact that the Wickenburg area has suffered through four consecutive years of drought that didn't end until last winter," observes Dean Durfee, present BLM Gila Resource Area Manager.

Former BLM Area Manager Larry Hendrix shares Durfee's enthusiasm. He left BLM five years ago to manage the giant 235,000-acre ORO Ranch, northwest of Prescott. These were his comments on the AMP:

"I figured the cooperative attitude of the owners of the Pipeline Allotment made this a golden opportunity for showing that such a plan really can benefit a tough desert range. It worked so well that I carried the same concept with me to the ORO and immediately began putting in fences for a similar rest rotation grazing system."

He added that rest rotation principles looked just as promising to him as a rancher as they did as a BLM employee.

"You can't refute results," concludes Hendrix.

The AMP rest rotation system—as implemented on the Pipeline Allotment—calls for managing primarily for the "ice cream" plants of Mormon Tea and Bush Muhly.

"When you manage for these key plants, you are effectively managing for all forage," explains Durfee.

The grazing system calls for grazing one pasture all season long the first year, then grazing it a second year after seed has matured and dropped so that cattle can trample it into the ground and get the seed started. The pasture is given complete rest in order for seedlings to establish and to restore vigor in previously-grazed plants.

The prospects for wildlife look equally bright on the Pipeline Allotment. Durfee is planning construction of 18 water guzzlers, primarily

for quail and other small animals. Gradually, the range is providing for the harmonious production of both livestock and wildlife, with other resources also sharing in the returns.

The Pipeline Allotment and other successful AMP's are proving today what cooperative action by ranchers and BLM can accomplish. The Bureau's policy calls for accelerating AMP implementation in the future.

A History of Allotment Management Plans

The concept of an Allotment Management Plan, or grazing system, isn't new. The Forest Service had been practicing rest-rotation on an experimental basis for many

Berkley Forest Service experimental station and elsewhere.

Gus began touring the West, scheduling schools and seminars on how to work cooperatively with ranchers and in the implementation of allotment management plans. Initially, his comments were received with mixed emotions, but the proof of the pudding is in the eating. Once a few rest-rotation grazing systems were implemented on BLM ranges and forage conditions improved, support grew. Gus stressed that while rest-rotation grazing was one of the basic tools of an AMP, it wasn't necessarily the only way to go. Actually, deferred or even full-year grazing can be part of an AMP grazing system.

The principles of rest-rotation

the land are being protected.

The Allotment Management Plans provide this assurance in a positive cooperative program that can benefit every use on the land.

Steps in Preparing An AMP . . .

1. The livestock operator (rancher) and BLM Range Conservationist tour the allotment and discuss basic objectives for improving forage.
2. Basic factors/range data and economic factors are related to this specific allotment.
3. Armed with this information, the Range Conservationist returns to his office to write up a proposed AMP.
4. The proposal is reviewed by other staff members and further input added.
5. Range Conservationist returns to the rancher and carefully goes through the proposal and makes whatever changes both feel are advisable.
6. After the plan is agreed upon by the rancher and BLM, the implementation begins. This can include additional studies, water development, fencing, corrals, etc. In rest-rotation systems, it means the separation of the allotment into self-sustaining pastures.
7. Annually, the Range Conservationist and the rancher review the AMP to see what adjustments are needed to best accomplish the stated objectives.



years before BLM became interested.

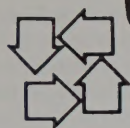
In the mid- 1960's, a former BLM employee, Glen Fulcher, who had quit the Bureau to head up the University of Nevada Department of Agricultural Economics in the 1950's, returned to spearhead the development of AMP's. One of his first actions in taking over the BLM range program in 1963 was to hire Gus Hormay to pull the planning together and teach the concept of AMP's to Bureau employees and ranchers alike. Hormay was a pioneer in rest-rotation grazing and he proved the effectiveness of this particular type of system at the

were best accepted in the northern states where rainfall is more prevalent, but—says Hormay—the basic physiology of plants is the same wherever you go and rest is essential for good plant growth.

While implementation of AMP's is not a guaranteed panacea for improving every range condition, they do reflect the concern of both BLM and the ranchers for establishing good management.

The public currently is demanding an accounting of range practices and livestock numbers. They also want assurances that wildlife, wild horses and burros are allocated forage, and that total resources on

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Grazing Management Systems

If you were to eavesdrop on two serious range conservationists some afternoon you would probably hear such terms as South African switch back, short duration, intermittent, deferred, high intensity-low frequency, rest, etc. To the layman it might sound as if they were talking about last Monday night's football game. In reality, they are discussing some of the many livestock grazing management systems that have been developed and put into operation in the western United States.

To develop a proper grazing management system one must find out as much as possible about the area to be managed, establish objectives, and then understand and evaluate the basic principles of plant and animal management. Next, carefully select the best combinations of these principles which will accomplish the objectives and, of course, study and evaluate the results to determine if changes are necessary.

Before discussing each of these steps, let's first attempt to define grazing management systems. A *Glossary of Terms Used in Range Management*, published by the Society for Range Management, defines a grazing system as "A specialization of grazing management which defines systematically reoccurring periods of grazing and deferment for two or more pastures or management units." Other authors refer to systems as specialized plans, sequences of livestock grazing, or grazing formulas. However, for BLM rangeland management, a more proper definition would be a documented schedule of livestock grazing designed specifically to accomplish plant and animal objectives for a given area or allotment. I do not agree that grazing systems should be limited

Roger Mertens

by requiring the area to have two or more pastures and I will explain why later.

Now, let's discuss each of the steps necessary to develop a grazing management system. We must find out and document as much about the area to be managed as possible. Most of this information is obtained by plain old communications—sitting down together and discussing the area. Additional information will be obtained by the use of field inventory crews.

Information needed to establish objectives and develop a grazing system should include but not be limited to:

1. Vegetation – Grazing systems are designed to properly harvest the vegetation resources. Therefore, the managers must know such things as production (usually expressed in pounds per acre), and conditions of the vegetation communities and the kinds, abundance, and growth requirements of the important plant species. This information will be used to estimate the grazing capacity for the area. Grazing capacity is defined as that portion of the vegetation production that can be removed annually while still providing adequate soil and plant protection. Range condition is an indication of the present health and production of a range area in relation to what that area is potentially capable of producing. Condition is usually expressed as either excellent, good, fair, or poor.
2. Animals – To ensure the needs

of all grazing animals (wild and domestic) are provided for and evaluate their use of the area, we need to know what species of animals are present, their numbers, how long they use the allotment, and requirements of each kind for food, water, cover, and habitat area.

3. Water – The key to success for any grazing system is distribution and control of the grazing animals. Both of these are tied to the location, reliability, and quality of available waters.
4. Range improvement facilities – Location, condition, maintenance responsibility, and problems associated with each facility (fence, cattle guards, water wells, pipelines, seedings, etc.) must be documented. These facilities will play a major role in the success or failure of the grazing system.
5. Animal husbandry practices – Discuss with the livestock operators such practices as salting, herding, breeding areas, lambing grounds, type and quality of livestock, supplemental feeding, branding and weaning times, and trailing needs.

Developing Management Objectives

Following the information stage comes development of management objectives. In BLM's grazing management program, objectives are defined as what can be accomplished to resolve grazing problems through control, use, and manipulation of livestock and development of facilitating projects. The objectives should be reasonable, quantifiable, measurable with at least beginning and ending points, and capable of being accomplished within a rea-

sonable time frame.

Developing objectives for a grazing allotment can be simple or very complex depending on the situation and potential for the area being managed. Managers must thoroughly analyze the information collected and develop objectives that will first preserve and improve the vegetation and soils of an area while properly harvesting its resources. Livestock performance and production objectives can then be determined but they must not conflict with the resource objectives or adversely affect the success of the grazing management system developed.

Resource management objectives may include reducing soil erosion, producing additional forage for livestock and wildlife, and improving wildlife habitat. Livestock performance and production objectives may include increasing calf crops, increasing cattle numbers, and producing heavier calves. Remember, from the objectives, the grazing system will be developed to manage the allotment. Therefore, it is important that each objective state what will be accomplished and what areas within the allotment will be changed, the amount of change, and what plant species must be maintained or changed.

For the purpose of discussion, let's look at two examples: beginning with one where the allotment information indicates that the major livestock forage plants are producing well below their potential. In our hypothetical allotment, past grazing has resulted in a poor range condition with good quality forage plants greatly reduced in numbers throughout the allotment and replaced by less desirable species. Our objective may be to increase livestock forage production by 50% in the sagebrush/grass plant communities throughout the allotment. Plant species that should be managed are bluebunch wheatgrass, Idaho fescue, and bitterbrush. This objective should be accomplished within 15 years without any mechanical land treatment (plowing and seeding, burning, or spraying sagebrush with 2-4D) or within 5 years if approximately 20% of the major sagebrush areas in the

allotment are treated.

An example of an objective to solve a livestock problem in this allotment would be to increase the mother cow herd by 25% within the next ten years while maintaining a spring-summer-fall grazing season. To accomplish this, forage production must be increased proportionately.

For our second example, information from the allotment shows vegetation and forage production is at or near potential, condition is good, and no wildlife or erosion problems exist. Therefore, the objective will be to maintain the status quo.

After objectives have been prepared, we must evaluate how we can obtain better livestock distribution to ensure as uniform grazing as topography and vegetation production will allow. This usually is accomplished by more year long water developments (wells, pipelines from storage tanks or pits, and deeper reservoirs). Also, better salting and herding practices can be employed by the operator and drift or management fences can be constructed.

It is now time to prepare a grazing management system. Each system is unique to the allotment being managed and must be adapted to local conditions. However, this uniqueness stems from a set of basic vegetation growth, use, and management concepts that must be applied in developing any management system. Managers must have a good understanding of these concepts which include:

1. Vegetation is a living renewable resource that grows and reproduces from moisture and nutrients obtained from the soil and air. Grazing animals obtain their nutrients from eating the vegetation.
2. Soil is the foundation for all plant growth and along with climate determines the amount and kind of vegetation potential an area will support.
3. Grazing animals are creatures of habit that prefer some plants over others, prefer areas that are close to water and where slopes are not too steep.
4. Grazing can be either detrimental or beneficial to plant

communities.

5. Grazing animals are not barometers of range condition. Animals can maintain themselves and even improve on poor condition ranges because less preferred and undesirable vegetation species are nutritious.
6. Grass plants store food for future use in their roots and crowns (part of the plant immediately above ground). The majority of that stored food is used for growth following winter dormancy. After sufficient leaves are produced in early or mid-summer the plants start producing more food than is used. This excess food is stored for winter survival and to start the next spring's growth.
7. Grazing during the plants growing season removes the leaves and stems from which the plant produces its foods for future growth and seeds from which the species reproduces.
8. Grazing is a means of pruning the vegetation which, if done properly, will stimulate growth.
9. Grazing the same plant or plants year after year during the growing season will eventually kill those plants.
10. Continuous grazing for a long period of time by a single kind of livestock or wildlife may drastically change the vegetation community. For example, an area dominated by grass and continuously used by cattle may change to being dominated by undesirable shrubs.
11. Livestock production is best obtained during the spring and summer periods while the vegetation is green and growing.
12. Most desirable range vegetation is reproduced by seeds which are produced annually on seed stocks. Seeds must be planted and protection from grazing provided to the next spring's seedlings in order for a substantial amount of reproduction to occur.
13. Areas that will be grazed during the growing season should not be used until the range is ready for grazing. Range readiness is

normally determined when desirable plants have produced enough growth (usually 3-6 inches of new leaf growth) so grazing will not permanently damage the plant. Soils should also be dry enough to avoid trampling damage.

The managers must now decide which one or combinations of basic management concepts should be applied to accomplish the objectives for a given allotment.

As a start, let's first look at why our example allotment is producing well below potential. Like so many public land allotments in the West, it probably has been used by cattle for the last 75-plus years. Grazing starts each year in the spring as soon as snows are gone and the grass has "greened up" (about April 15) and continues through the summer into late fall or early winter when the hay is put up on the home ranch and snows start to come. Grazing capacities have been established by vegetation inventories twice during the last 30 years and grazing use adjusted accordingly. However, the only control or management on the livestock use has been water, salting, and some herding for better distribution. Therefore, grazing has occurred year after year on the entire allotment during the critical growth periods of the plants. Animals are free to select and use their most desired species first then less desirable ones after the preferred species are gone. Water is available throughout the allotment in the spring when intermittent streams are running and all reservoirs are full which provides for uniform distribution of livestock. However, as summer comes, the streams dry, some reservoirs are too shallow to hold yearlong water, and springs reduce their flow to a trickle. This leads to livestock concentrating on the remaining waters, causing heavy use on all forage species within one or two miles of each water site. As fall approaches, rains begin, temperatures cool, and livestock again use more of the allotment.

The result of all this is that cattle continuously grazed the desirable plants each spring causing some of them to die from the lack of food

reserves. Little or no reproduction has occurred because seed stalks are not allowed to mature. The desirable forage species close to yearlong waters have been totally eliminated because of the combination of spring and continued heavy summer and fall use.

The management problem is how to increase production without adversely affecting the users of the allotment.

First, even though there have been two previous adjustments of livestock use to estimated grazing capacity, this may be necessary again, especially if the past 10 years of unmanaged use has again significantly reduced the proper grazing capacity below the current level of livestock use. Experience has shown that no grazing system will work if grazing use is occurring in excess of the proper grazing capacity. In fact, the system could actually accelerate the rate of decline of the vegetation community. This action will require a temporary reduction in the time and/or numbers of livestock using the allotment but, in the long term, if our objectives are accomplished, twenty five percent more livestock will be allowed to use the allotment.

Selection of Grazing Management Concepts

Next comes the selection of grazing management concepts to accomplish our objectives. We want to increase forage production. To do this, we must concentrate on the health and improvement of existing plants. One way to accomplish this would be to not allow any use of the vegetation until after the plants have produced and stored their maximum food reserves for each growing season. For most cool season grasses in the Rocky Mountain and Pacific Northwest states, this period occurs in early to mid-summer (July) while in the Southwestern states this period may occur in late summer (September). For our sample allotment, this date is July 10. Therefore, if our management team feels that this will accomplish our objectives within our time frames, we will implement a deferred system. Grazing is not allowed or deferred for a specified period of time during the growing season. For our

allotment the deferment would be from the time spring growth begins until July 10. After the period of deferment, grazing will be allowed for as long as weather permits up to the amount equal to the grazing capacity. This system will allow for maximum improvement of the health of the existing plants which will lead to bigger and more productive plants while allowing maximum harvest of the production when it is least detrimental to the plants. Deferring use will allow some plants, even in the heavy use areas, to produce seeds. Then if they germinate the next spring, the new seedlings will be protected from grazing until mid-summer. This will lead to more production and improvement in the number of desirable forage plants.

The major disadvantage of this system is livestock operators must provide forage for their cows an additional three months each year. Also, livestock are not using the allotment when it is producing its best nutritional forage. For our first sample allotment, the operator cannot produce or obtain this amount of additional forage and one of his ranch objectives is to remove livestock from the private meadows as early in the spring as possible. Therefore, the deferment must either be reduced, which in turn will reduce the benefits or another system must be developed.

Next, the management team must look at the combination of concepts that will allow grazing to start in early spring but still increase production. "Range readiness" studies in our allotment show that April 15 is too early for grazing to start most years. However, because climatic conditions vary greatly from year to year, the actual date grazing will start should be determined in the field each spring jointly by the BLM manager and the livestock user. So now we have the start of another deferred system; defer grazing each spring until range readiness. This allows for grazing to begin without permanent damage to the vegetation and soil but does not allow increased production. However, it should stop any further deterioration if the area is used at or near the proper capacity.

In our second sample allotment where the condition is stable, a simple deferment until "range readiness" should be adequate. There is a place for one-pasture grazing systems on BLM lands and this is definitely one of these cases.

In our first sample, to increase production we must continue deferment beyond range readiness on at least one-third of the allotment each year. However, to avoid heavy spring use year after year, the area(s) that are used early in the spring should be deferred at least once during the next two years. So if we divide the allotment into three equal areas we would defer pasture number one the first year until July 10 and allow grazing in the other two after range readiness until July 10. Then grazing would occur in all three pastures for the remainder of the season. The second year pasture number two would be deferred and pastures one and three would be grazed in the spring and again after July 10 all three would be grazed. The third year the same process would occur but pasture number three would be deferred until July 10. We have rotated the deferment to all three pastures over a three year period and have developed a three-pasture deferred rotation system.

These systems provide livestock use in the spring, periods of deferment each spring for plant improvement, and flexibility to solve specific problems. This is also a good system to bridge the gap between continuous season long grazing and more complex systems that will accomplish our objectives faster.

Either in the beginning, or after a few years of deferred rotation grazing, it may be decided this system will not produce significant additional forage to satisfy our objectives. Therefore, we must further intensify our management efforts.

Instead of deferring until July 10, it may be necessary to defer grazing on part of the allotment until "seedripeness." Grazing after this time allows the forage produced to be harvested and uses the grazing animals as a means of planting the mature seed. To help the seedlings survive the following spring, that pasture should be deferred for

the complete growing season as a minimum and rest the complete year is desirable. This is referred to as a rest rotation system. Rest rotation is an intensive grazing system where one or more pastures of an allotment are deferred from grazing until "seedripeness" one year, followed the next year by complete rest. This cycle of deferment and rest is rotated to all of the pastures in the allotment during the following years. It normally requires three or more pastures and livestock control is usually obtained by fencing.

The first year grazing can start at "range readiness" in pasture number one. Pasture number two will be deferred until "seedripeness" of the important forage species (August 15) and then it is grazed while pasture number three is rested. The second year pasture number three or the pasture rested the previous year will be grazed in the spring while pasture number one will be deferred until "seedripeness" and pasture number two of the deferred pasture in the previous year will be rested. The third year pasture number two is grazed in the spring, pasture number three will be deferred until "seedripeness" and pasture number one will be rested. The fourth year pasture use and rest is the same as the first year.

Benefits from rest rotation systems include concentrating livestock during the breeding season, which produces more calves; spring livestock use occurring in a pasture that was not used the year before; livestock forced to use less palatable but just as nutritious plant species, which results in more uniform utilization; and plants receive rest for vigor, seed production, and seedling establishment. All of this leads to more production, better condition, and more stable soils. Pastures are also left unused each year for wildlife and emergency livestock use. Disadvantages are that these systems are usually more costly to get started because of the amount of fencing and water development and more labor intensive because of project maintenance and livestock control and movement.

The three systems, deferred, deferred rotation, rest rotation are the basic systems from which most

specific management plans are developed. Modifiers include such things as more pastures, livestock moved when desired level of plant use is obtained, land treatment work in some pastures to stimulate growth and reproduction, and increasing or decreasing the kind, amount, and time grazing animals are using a given pasture or allotment.

Each grazing system developed is unique to, and adapted for, a particular allotment and will not normally work on another area. However, the principles of proper vegetation management should be applied to all grazing systems in whatever combination possible to accomplish the objectives.

Putting a new grazing management system in operation may take several years and a considerable amount of money. Additional water developments and, in some cases, fences must be built. Modifications may be necessary during years of drought or heavy insect use or because of fire or loss of water in some pastures.

The last step in developing our grazing management system is to evaluate our actions to see if our objectives are being accomplished.

Studies must be started as soon as possible to periodically collect information for this purpose. These studies will usually be nothing more than continuing to collect the same kinds of information used to develop the system. Vegetation production, condition and use data along with each year's animal use is combined with yearly climatic data to give the managers adequate information to tell if changes occurring are due to grazing management or weather. Also, scheduled evaluation of this data is necessary to determine if animal use and/or the management should be changed.

A proper grazing management system will have lasting positive effects on the rangeland, making it more usable and enjoyable for everybody.

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THE HISTORY OF Grazing on the Public Lands

By Paul Herndon

On one of his voyages to the New World, Columbus brought cattle to the Caribbean. A few years later, descendants of those animals were introduced into Mexico, and as Spanish settlers crossed the Rio Grande, their herds grazed on grassland in what eventually would become the State of Texas. There, that particular breed would become known as the Texas Longhorn.

When pioneers from the United States arrived in Texas, they found the Longhorns already established. These settlers had experience in herding cattle, and many became cattlemen in Texas. By the time of the Civil War, the ranching industry was a Texas tradition.

The Civil War was a major disruption for the Texas ranchers. Men returning from the war found their markets in ruin and the economy in disarray. Least affected by the war were the Texas Longhorns. These tough, resourceful animals had not only survived, but had multiplied.

In order to find new markets, the cattlemen made heroic drives to deliver their herds to railroads then being built across Kansas and Nebraska. Along the way they found a vast sea of grass that stretched from the Missouri River to the foothills of the Rockies, and their cows arrived at their destination fatter than they had been when they left Texas. Many of the ranchers and their cowboys were quick to recognize opportunity, and, in a few short years new livestock ranches had spread across the prairie all the way to the Canadian border.

This grassland was public domain,

and rarely did a rancher bother to get title to the land where his cows grazed. By 1880 livestock grazing was at its zenith, and the concepts of "open range" and "free grass" had become a tradition throughout the West.

The western rancher and the cowboys who herded his cattle expressed the ultimate in rugged individualism. The law was whatever a man could enforce, and except for those "gentlemen's agreements" that one rancher made with his neighbors, grazing operations were unfettered and unregulated. Yet, even before the first trail herd moved out of Texas, the seeds of change already had been sown.

In 1862 Congress had passed the Homestead Act providing settlers up to 160 acres of public domain land if the settler would live on the land and bring it under cultivation. In time the homesteader would crowd the cattlemen off the more fertile prairie lands and force his retreat to less fertile and more arid lands still further west. In the end the stockman was left with land too poor to attract the farmer. Much of this land was fragile and, once its vegetative cover was depleted, its recovery could take generations.

It was also public land where one man's right to a given range was no better than another's. Competition for grass was often bitter. This was especially true when the competition was between cattlemen and sheep growers.

Sheep had come to the western range long after the cattle industry was already firmly established. There were few sheep west of the Mississippi River in 1840. It was not until the transcontinental railroads provided access to markets that sheep herding became a factor in the use of public lands.

By 1850 the estimated sheep population of the 17 grazing States was just over a half million animals. Many of these were grazing in small flocks on private land.

However, the sheep soon proved to be as well adapted to the western range as the Texas longhorn, and grazing sheep proved highly profitable. This made outside investment attractive. An absentee investor could buy animals, place them under the care of a herder working for hire, then sit back and wait for time to bring in a profit.

Unlike the cattleman who was forced to build and maintain a base of operations, the sheep herder could live in a wagon and allow his herd to drift to wherever grass and water were abundant. Eventually herds were crossing State lines and migrating from high to low altitudes.

By 1880 there were 19 million head of sheep in the 17 western grazing States. Cattlemen were becoming alarmed. Hostilities broke out between the two groups. Sheep and cows were killed as each side

Homesteaders claimed most of the best land for agricultural purposes, leaving the stockmen left with only that land too poor to attract the farmer.



Bureau of Reclamation, Montana 1908

raided the other's herds and flocks. Human life was lost as well.

The friction was rooted in a number of reasons and beliefs. Cattlemen complained that sheep carried oil in their hooves that repelled cattle. Sheep also cropped the grass shorter than the cow did, making it harder for cattle to graze behind them.

Whether cattleman or sheep herder, the system provided no incentive for the individual operator to consider what was good for the land. If one man's animal did not eat a blade of grass, he could be sure that another man's would. Overgrazing became the common practice. Then, during the winter of '86-'87, weather combined with overgrazing to bring disasters that

no man had anticipated. John Clay, a co-owner of the VVV ranch on Montana's Wind River describes what happened:

"By August it was hot, dry, dusty and grass closely cropped. Every day made it apparent that, even with the best of winters, cattle would have a hard time and tough cattle would only winter with a big percentage of loss... Our neighbors kept piling cattle onto the bone dry range... Thousands of other cattle were spread over the western and north-western country in the most wreckless way with no thought for the morrow.

The Morrow was winter, one

of the longest and deadliest in the history of the West, and in the spring of 1887, the piles of dead cattle were stacked like rotting cordwood in the corners of barbed wire-fences..."

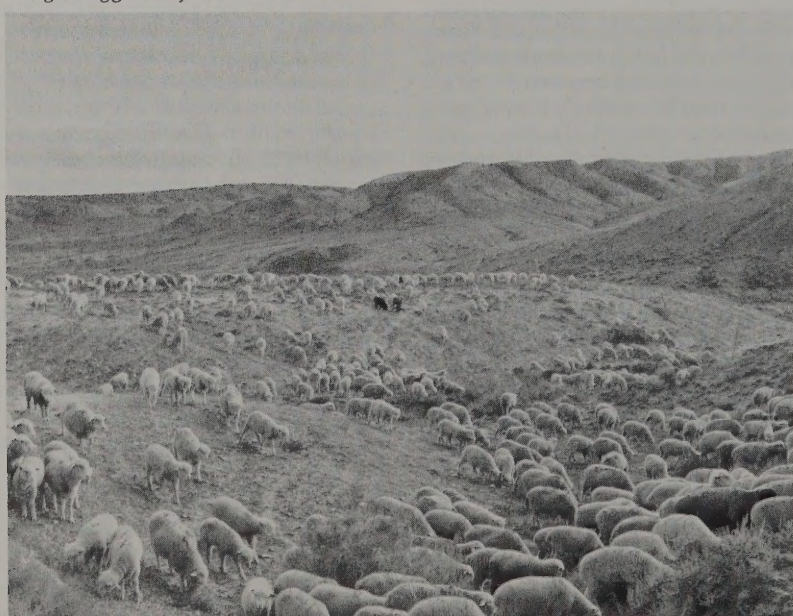
That winter was a disaster from which western ranchers never fully recovered, but its lesson was largely unheeded.

The deterioration caused by overgrazing continued until the drought and depression of the 1930's convinced livestock operators that drastic measures would be needed to save the industry. Operators petitioned Congress to enact legislation to regulate grazing on the public range. Such a bill was introduced by Congressman Edward T. Taylor of Colorado.

In testimony on behalf of his bill before the Senate Committee on Public Lands and Surveys, Taylor described the condition of the western range at that time:

"I might mention that when I was District Attorney of Northwestern Colorado, I prosecuted eight different murder cases at one term of court, the greatest number of them being the outcome of fights over the use of the range, mostly between cattle and sheep graziers... I call your attention to the fact that we are rapidly permitting the creation of small Sahara Deserts in every one of our western States today. We have such a condition in the southern parts of Colorado at this time, where there is nothing left but sand, which drifts back and forth, hither

Sheep, having different jaw structures from cattle, graze the land much closer than cattle do, leaving little vegetation in their wake. Sheep have been referred to as "range maggots" by cattlemen.



and yon with every breeze. . . ”

The Taylor Grazing Act of 1934 brought the first regulation to the public range. To enforce the law and administer its provisions, Congress created the U.S. Grazing Service.

Present day critics of the Grazing Service often fail to consider the limited mission of the agency. It administered a single law for a single constituency—the western livestock operator grazing on the public lands. Yet under the circumstances, the Service accomplished much. Working through local advisory boards, the district graziers were able to allot specific portions of the Federal range to local livestock operators, and the itinerant herdsman, who had traditionally followed the grass wherever it could be found, lost his privilege to use the range.

We should also remember that the Grazing Service took over the responsibility to manage the Federal range only after extensive damage had already been done. Numerous reports dating from that period detailed the extent of the damage and sought to arouse public concern.

Even within the Department of the Interior there were many who failed to comprehend the magnitude of the problem or the corrective measures needed to reverse the trend toward deterioration. In his testimony on the Taylor Grazing Act, Interior Secretary Harold Ickes had assured Congress that he could administer the provisions of the Act for \$150,000 per year.

While the Service had its greatest success in allotting specific portions of the range among local livestock operators, it found the problem of overstocking more troublesome.

In this, as in all other matters, the grazer was supposed to consult with advisory boards made up of local ranchers. These boards were expected to address the problem of overgrazing, but the economic well-being of individual ranchers, and, indirectly, that of the local communities in which they lived, was closely tied to the number of animals the rancher was allowed to run on the Federal range. This meant that the local advisory board member could have placed his

friends and neighbors in financial hardship.

Many simply refused to make the hard decisions that were necessary to reverse the process of range deterioration that had been at work for so many years.

Here and there a courageous District Grazer tried to reduce grazing use over the objections of the local advisory board. In such cases he usually found himself under pressure from members of Congress and often from his superiors in Washington.

In addition to the politics of the situation, another factor prevented the District Grazer from effectively managing the Federal range: the lack of funds.

agency licenses to increase the number of animals they were allowed to graze on the Federal range. In most cases these emergency permits were continued long after the shooting stopped.

In 1946, Congress combined the functions of the Grazing Service with those of the General Land Office to create the present Bureau of Land Management. In the early 1950's the Bureau set a 10-year goal to bring grazing use into balance with the capacity of the Federal range to product forage.

Progress was made, but in their efforts to meet deadlines in adjudicating individual allotments, many District Managers made concessions to individual ranchers inconsistent



A shepherd's overhead on the range is low. Sheep graze so thoroughly and so slowly that the shepherd packs his housing needs and lives on the range for weeks at a time. Modern shelters on the range run from horse drawn carts to recreational vehicles. This sheep herder, in 1940, is having his winter range license checked by BLM's forerunner, the Grazing Service.

Secretary Ickes' optimistic estimate of how much money would be required to restore the range soon proved to be woefully inadequate, but Congress was reluctant to provide needed funds.

Despite many handicaps, the Grazing Service and local ranchers made substantial improvements in grazing practices. But there were many set backs. For example, during both World Wars I and II pressures for greater production of meat forced the Service to relax its restrictions on overgrazing, and livestock operators were issued emer-

with the hard realities of the land's ability to product forage. In other cases, they failed to allocate adequate forage to meet the needs of wildlife and, in almost every case, they failed to consider the forage consumed by wild or unlicensed horses or burros.

The readjudication of the range was complete by the mid-1960's. If judged by conditions prevailing at the time of the Taylor Grazing Act was passed, the accomplishments were monumental; if judged by the potential of the land, there remained much to be done.

As late as 1970 an Interior Department annual yearbook warned that 123 million acres of public rangelands were in fair to poor condition.

With the readjudication of the range complete, the Bureau turned its attention to more intensive management of individual grazing allotments. The goal was to work out Allotment Management Plans (AMP's) with each individual rancher. The AMP would be the blueprint for the management of the rancher's specific portion of the range. The plan set out seasons of use, and the number of livestock the rancher could graze on his allotment.

The AMP encouraged a scientific approach to the practice of livestock grazing.

Now other factors were starting to make their impact on the problem. Public officials were not alone in their concern over the condition of the Federal range. At long last apathy was giving away to public concern.

Articles decrying the condition of the range were starting to appear in the popular media. Coming on the heels of aroused public concern about the environment, reaction was widespread. In response to an alarmed public, Congress moved to meet the problems associated with the environment.

In 1969 Congress passed the National Environmental Policy Act (NEPA), and in 1974 a private conservation organization, the Natural Resources Defence Council (NRDC), brought suit against the Secretary of the Interior under that Act. At issue was the extent of BLM's compliance with NEPA's requirement that the Bureau prepare environmental impact statements analyzing the effects of its grazing program. The Bureau had, by then, prepared a single document called a programmatic environmental impact statement, covering its grazing program with the intent of gathering and publishing supplemental data to cover specific grazing areas. Bureau officials contended that such an approach met NEPA's requirements.

The NRDC argued that such a programmatic statement defeated the intent of NEPA and asked the Court to require site-specific state-

ments. The Court ruled in favor of the Plaintiff's position. BLM agreed that it would prepare 212 statements in support of livestock grazing on specific segments of the Federal range.

In later negotiations with the NRDC, the Bureau was able to reduce the total number of environmental statements it would prepare.

While the Court's decision made certain that BLM would consider environmental impacts before reaching any decision about livestock grazing on public rangelands, the decision also imposed certain restrictions. In effect, the management of livestock is maintained at the status quo on given portions of the range during the time the Bureau is preparing an environmental statement.

Although public land legislation began with the Continental Congress during the time of the American Revolution, Congress had never enacted comprehensive legislation for the management of public lands. Instead, laws had been passed to meet specific problems within specified time frames. By the 1970's there were almost 3,000 separate pieces of legislation in force that had some effect on the management of public lands.

In 1976 Congress recognized the need for a complete overhaul of public land legislation when it passed the Federal Land Policy and Management Act of 1976.

This Act made minor adjustments in the Taylor Grazing Act, including a ten-year tenure for livestock operators, and changes in the portion of grazing fees that would be returned to grazing districts to finance range improvements. But the greatest impact of the new legislation was the reversal of the 200 year-old policy of disposal for all public lands.

Under a new policy of retention it became feasible for the Federal Government to act upon its responsibility to maintain and enhance the productive capacity of public rangelands. This responsibility was reaffirmed when Congress passed the Public Rangelands Improvement Act of 1978.

That Act authorized expenditures of \$360 million for on-the-ground range improvements to be spent

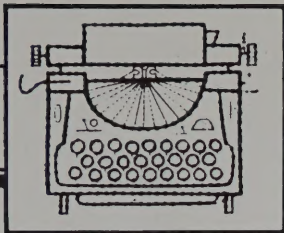
over the period of 20 years. It also mandated close cooperation between the Bureau and ranchers toward improvements of grazing allotments.

The optimistic expectations that followed passage of the Public Rangelands Improvement Act (PRIA) however, have yet to be realized.

Funds authorized by PRIA have not been appropriated by Congress in any of the three years since passage of the Act, and most likely will not be appropriated until the Federal deficit is brought under control. Consequently, BLM has been working to improve the efficiency and effectiveness of its current rangeland management programs. Under new policies, available funds and work effort will be concentrated in rangeland areas most in need of immediate management attention or where improvement efforts will product the greatest public benefits. Livestock operators and other rangeland interest groups will be asked to take an active part in improvement efforts and may contribute private funds towards improvements. If a person or interest group directly benefits from an improvement, they will be asked to finance maintenance of the structure. Since the public lands belong to the public, it seems natural to make them part of rangeland management.

Range managers agree that the fight to restore the rangelands to their potential has been a long struggle. Much remains to be done, but the important thing is that we are moving in the right direction—in cooperation with others concerned about the lands.

Paul Herndon is a Public Information Specialist in BLM's Office of Public Affairs, Washington, D.C.



News Highlights

O&G Filing Fees

The filing fees on oil and gas lease noncompetitive applications went up on Feb. 19, 1982. Both over-the-counter and simultaneous oil and gas (lottery) application fees rise from \$25 to \$75, and the rental on simultaneous oil and gas leases issued after Feb. 19 goes from \$1 per acre per year for the ten year lease period to \$1 per acre per year for the first five years of the lease and \$3 per acre per year thereafter.

"Where Can I Buy Public Lands?"

This is a question due to be repeated with greater frequency in the coming months. Interest in Congress and the Administration in selling "surplus Federal land" has prompted a new initiative to identify unneeded Federal real property holdings that will be sold at fair market value to increase revenues to the U.S. Treasury. The President, on Feb. 25, issued an Executive Order establishing a Property Review Board and directives concerning the disposal of Federal real property. The Board will review prior disposals of surplus property to ensure it is being used for the purpose for which it was conveyed and also establish for each Executive agency an annual target amount of real property holdings to be identified as excess.

Your Public Lands will be the Bureau of Land Management's vehicle for informing the public of lands available through the Bureau.

BLM is developing a preliminary inventory of public lands presently identified for some type of transfer out of Federal ownership. For more information on these lands, contact the BLM State Office in the State where any desired Federal unimproved public land is located.

Wilderness Legislation Proposed

Interior Secretary Watt has proposed and Rep. Manuel Lujan of New Mexico has introduced legislation entitled "The Wilderness Protection Act of 1982." The Act would withdraw all National Forest System and Bureau of Land Management wilderness and wilderness study areas within the lower 48 States from mining and mineral leasing that would require surface occupancy until the year 2000. One critical point is that the bill would allow the President, following his recommendation to Congress that a BLM wilderness study area is unsuitable for wilderness designation, to release the area for uses other than wilderness. The bill also sets Congress a two-year deadline for acting on BLM suitable recommendations pending before it. If Congress doesn't act in that time period, the lands are

released.

Endangered Plant Booklet Offered

A pocket size field identification guide, Threatened and Endangered Plants of Alaska is now available from BLM's Alaska State Office. The booklet was a cooperative project between BLM and the U.S. Forest Service. Copies can be obtained by writing: BLM 701 "C" Street, Box 13, Anchorage, AK 99513.

Wild Horse and Burro Estimates Released

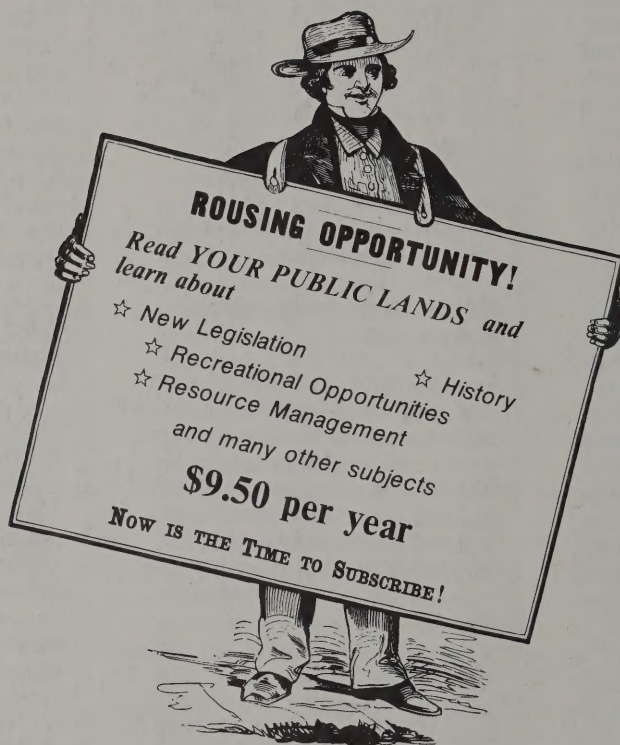
Current revised wild horse and burro population estimates show approximately 44,900 wild horses and 11,900 wild burros were on public lands as of October, 1981. Population estimates are updated biennially. In the 1980 estimates, 52,400 wild horses and 12,000 wild burros inhabited public lands.

Arizona Gets a Birthday Present

When the State of Arizona turned 70 years old on Feb. 12, one birthday present it received was 29,300 acres of public land. BLM transferred the land to the State, bringing the total public land transferred to the State within the last eight months to 86,888 acres. All of the land is in the Phoenix and Tucson areas and has high potential for urban or industrial expansion.



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